

Method and apparatus for providing related images over time of a portion of the anatomy using fiducial implants

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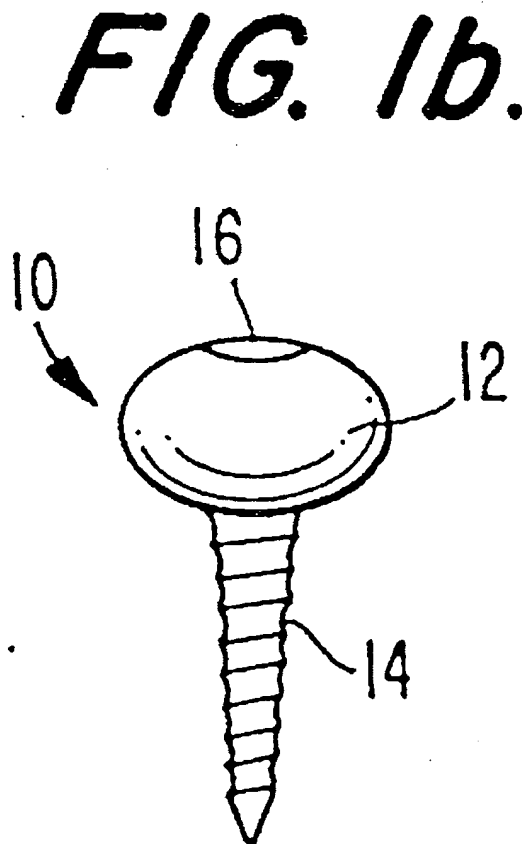
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The present invention pertains to a fiducial implant for the human body that is detectable by an imaging system. The invention is comprised of a first portion and a second portion. The first portion is configured to be detected by an imaging system when placed beneath the skin. The second portion is configured for fixed attachment to a bone beneath the skin without penetrating entirely through the bone and without fracturing the bone. The first portion is of detectable size and comprised of a material for detection by an imaging system, and sufficiently small to avoid the distortion of the skin when placed at an interface between the skin and the bone. The first portion also has at least a portion which is spherical defines a surface for cooperating with a tool for securing the second portion to the bone. Additionally, the placement of three fiducial implants into a portion of anatomy of the human body allows for the recreation of a particular image slice of the portion of the anatomy taken by an imaging system with respect to a first time period, at subsequent imaging sessions and also with different scan modalities. This provides a doctor with the ability to accurately follow the progress of the portion of the anatomy of interest. Moreover, the existence of three fiducial implants allows a target to be identified within the portion of anatomy relative to an external coordinate system. The portion of anatomy with the target may then be operated on, for instance, robotically, or precisely irradiated.



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